

## Speech by Alexander Graham Bell, February 13, 1913, with transcript

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Copy of Dr. A. Graham Bells remarks before a meeting of the Board of Regents of the 1913 Feb. 13 on the award of the Langley medals

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Since the award of the Langley Medal to the Wright Brothers three years ago, there has been great activity in the field of aviation. The war departments of the different nations have been constantly at work, but little is known concerning the character of the advances made. So far as the public are aware the chief progress has related to details of construction and improvements in motive power. The advance has been much greater in the art than in the science.

There has, however, been considerable advance in the science of aerodromics along the lines laid down by our late Secretary, Dr. S. P. Langley, by M. Gustave Eiffel, Director of the Eiffel Aero-Dynamical Laboratory in Paris.

In 1907 M. Eiffel published the results of experiments made at the Eiffel Tower; in 1911, he published the results of his experiments at the aerodynamical laboratory in Paris on the resistance of the air in connection with aviation, and these results have been of great value to aerial engineers in designing and constructing flying machines. Indeed his works upon the subject have already become classical.

In view of the fact that his experiments have been directly in line with the researches of the late Secretary Langley, the award of a Langley Medal to M. Eiffel would seem to be peculiarly appropriate.

2 In spite of the great advances that have been made in the art of aerodromics we are confronted with a long list of fatalities to aviators, for whose protection there remains a great deal yet to be done. There has been one very notable development in this direction, made by an American, Mr. Glenn H. Curtiss of Hammondsport, N. Y.

In 1908, the Aerial Experiment Association, of which Mr. Curtiss was a member, discussed the advisability of having flying machines so constructed as to enable them to float, and to rise from the water into the air, as an element of safety. In pursuance of these ideas, the Association's aerodrome N o 3, the "Curtiss June Bug" was attached to pontoons and an experiment was made on Lake Keuka on Nov 6, 1908. Although the speed on the water appeared to be satisfactory, the machine failed to rise in one air, but the occasion formed the starting point for Mr. Curtiss' independent researches.

After the dissolution of the Association, March 31 1909, Mr. Curtiss continued his experiments to find a practical solution of the problem, and in May, 1910, he made that remarkable flight from Albany to New York City over the Hudson River, a distance of 152 miles in 2 hours 52 minutes, with two light pontoons attached to his machine, to enable it to float should it come down into the water.

In 1911 Mr. Curtiss continued his efforts to construct a machine that would not only float, but would rise from the water into the air, and in January 1912, he succeeded in doing this in San Diego Bay, California. "On January 26, 1912" he says "the first success came;" and 78 3 on January 27, 1912, the Aero Club of America awarded him the Collier Trophy for his accomplishment.

In February, 1912, he demonstrated the use to the Navy of such machines by flying to the U. S. Armored Cruiser "Pennsylvania" and alighting in the water beside the vessel, when the machine was hoisted up on the vessel's deck, and then again lowered into the

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water without damage, showing the possibility of handling such machines without special equipment. He then rose from the water and flew back to the starting point.

By July, 1912, he had developed the remarkable machine he calls "the flying boat", which represents the greatest advance yet made along these lines. It develops great speed upon the water and also in the air, and is equally at home in either element. The world is now following Mr. Curtiss' lead in the development of flying machines of this type.

Great experience in the handling of aerial machines is necessary before aviators can safely make extended flights over land, where a fall might be fatal. The successful development of the hydro-aerodrome now enables this experience to be gained over water without serious danger to life or limb; and marks a notable advance in the direction of safety that might well be recognised by the Smithsonian Institution by the award of a Langley Medal to Mr. Glenn H. Curtiss.